

## Cetuximab for squamous cell carcinoma of the head and neck

### Product:

CETUXIMAB (Erbitux®)

### Class of drugs:

anti-cancer agent; epidermal growth factor receptor (EGFR) inhibitor

### Indication:

squamous cell carcinoma of the head and neck (SCCHN)

### Manufacturer:

Bristol-Myers Squibb Canada

### CED Recommendation

The CED recommended that cetuximab (Erbitux®) be funded for the treatment of squamous cell carcinoma of the head and neck (SCCHN) according to specific criteria. The CED noted that in a small subgroup of patients who would otherwise receive radiation alone for treating their locally advanced SCCHN, the addition of cetuximab to radiation may provide added survival benefits.

### Executive Officer Decision

Based on the CED's recommendation, the Executive Officer decided to fund cetuximab (Erbitux®) for the treatment of locally advanced SCCHN through the New Drug Funding Program according to specific criteria.

### Status

Funded through the New Drug Funding Program.

### Highlights of Recommendation:

- ◆ This CED review considered the use of cetuximab in the treatment of squamous cell carcinoma of the head and neck (SCCHN). More specifically, the CED evaluated the use of cetuximab for treating locally advanced SCCHN (cancer that has spread to the surrounding region but not to distant organs).
- ◆ There is one key clinical study supporting the use of cetuximab in the treatment of locally advanced SCCHN. In the study, cetuximab plus radiation was compared with radiation alone. The addition of cetuximab to radiation was found to be better than radiation alone at improving survival, disease progression and disease control.
- ◆ The CED noted that while cetuximab plus radiation has been shown to be more efficacious than radiation alone, standalone radiation treatment is not the most relevant comparator. Of more interest is the efficacy of cetuximab plus radiation relative to platinum-based chemotherapy plus radiation (the current standard treatment for this disease). There are however no direct comparison studies assessing these two treatment regimens. Therefore, it is unknown whether cetuximab plus radiation is superior to platinum-based chemotherapy plus radiation.
- ◆ The CED was able to identify a patient subgroup that may benefit more from cetuximab. A large meta-analysis indicates that platinum-based chemotherapy does not provide survival advantages in patients over the age of 70. Patients in this age group typically receive radiation alone and may benefit from the addition of cetuximab.
- ◆ Cetuximab costs approximately \$12,000 for a 7-week treatment course. In comparison, a course of platinum-based chemotherapy is \$80. Based on the Committee's assessment, cetuximab is not a cost-effective treatment for patients in whom platinum-based chemotherapy could be used. However, this drug does provide reasonable value for money if it is used for treating patients over age 70 who would otherwise receive radiation alone.
- ◆ In light of the clinical and cost-effectiveness data, the CED recommended that cetuximab be funded only for patients with locally advanced SCCHN who are over the age of 70 and have good performance status.

### Background:

Head and neck cancer includes cancers of the mouth, nose, sinuses, salivary glands, throat, and lymph nodes in the neck. Squamous cell carcinoma of the head and neck (SCCHN) represents more than 90% of all head and neck cancers. SCCHN arises in the squamous cells that line the moist tissue surfaces of the mouth, nose and throat.

Treatments for SCCHN include surgery, radiation therapy, chemotherapy or a combination of these. The mode of treatment depends on the site and stage of the disease, as well as the overall health status and age of the patient. For locally advanced SCCHN (i.e. cancer that has spread to nearby regions but not to distant sites), the standard treatment is platinum-based chemotherapy plus radiation. In patients over the age of 70, a large meta-analysis indicated that chemotherapy does not improve survival and hence the standard treatment in this age group is radiation alone.

Cetuximab belongs to a newer class of treatments called targeted therapies. It targets the epidermal growth factor receptors (EGFR) on cancer cells to inhibit tumor growth and to sensitize cancer cells to radiation.

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## Detailed Discussion:

- ◆ A single randomized controlled study (Bonner et al. New England Journal of Medicine 2006) was the focus of this review. The study compared cetuximab plus radiation to radiation alone in patients with locally advanced SCCHN. Compared to radiation alone, cetuximab plus radiation was shown to prolong overall survival, progression-free survival, and duration of local-regional disease control.
- ◆ Although the study found that cetuximab plus radiation is superior to radiation alone, there is no randomized controlled study to assess the efficacy of cetuximab plus radiation relative to platinum-based chemotherapy plus radiation. Likewise, there is no clinical study to support the use of cetuximab in addition to both platinum-based chemotherapy and radiation. Based on available evidence, it is unknown whether cetuximab offers any added benefits over platinum-based chemotherapy and radiation.
- ◆ *In making its funding recommendation and developing eligibility criteria, the CED took into consideration unpublished clinical trial data from the manufacturer. The manufacturer has requested that this data be kept confidential.*
- ◆ A seven-week course of cetuximab costs approximately \$12,000. A similar course of platinum-based chemotherapy costs \$80. A cost-effectiveness analysis showed that cetuximab provides reasonable value for money in patients who are greater than 70 years old (i.e. those whose only other option is radiation alone), but cetuximab is not cost-effective in patients for whom platinum-based chemotherapy plus radiation is a feasible option.
- ◆ **Overall, the Committee noted that cetuximab plus radiation appears to be clinically superior to radiation alone in the treatment of locally advanced SCCHN for patients with good performance status. However, it is unknown whether cetuximab provides any added benefits over platinum-based chemotherapy plus radiation. In view of the clinical and cost-effectiveness data, the Committee recommended that cetuximab be funded only for patients with locally advanced SCCHN who are over the age of 70 and have good performance status.**

*The CED worked jointly with a subcommittee involving cancer experts to review this cancer drug, as it does all other cancer drugs.*

## NDFP Funding:

Based on the CED's recommendation, the Executive Officer decided to fund cetuximab (Erbix®) for the treatment of locally advanced SCCHN through the New Drug Funding Program (NDFP) according to the following criteria:

- ◇ *The patient has locally or regionally advanced squamous cell carcinoma of the head and neck without distant metastases.*
- ◇ *The patient is over the age of 70 and has a Karnofsky Performance Score  $\geq$  90.*
- ◇ *Cetuximab is used in combination with curative radical radiotherapy.*

Details of the NDFP eligibility criteria can be found at the Cancer Care Ontario website:

<http://www.cancercare.on.ca/toolbox/drugs/ndfp/>



Ministry of  
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